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| APPLICATION NO.           | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|---------------------------|-------------|----------------------|---------------------|------------------|
| 10/760,482                | 01/21/2004  | Shoji Katsuragawa    | H9876.0077/P077     | 9805             |
| 24998                     | 7590        | 08/06/2007           | EXAMINER            |                  |
| DICKSTEIN SHAPIRO LLP     |             |                      | SHAH, MILAP         |                  |
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| Washington, DC 20006-5403 |             |                      |                     |                  |
|                           |             |                      | ART UNIT            | PAPER NUMBER     |
|                           |             |                      | 3714                |                  |
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**Please find below and/or attached an Office communication concerning this application or proceeding.**

The time period for reply, if any, is set in the attached communication.

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|------------------------------|--------------------------------------|---|--|
| <b>Office Action Summary</b> | <b>Application No.</b><br>10/760,482 | <b>Applicant(s)</b><br>KATSURAGAWA ET AL. |  |
|                              | <b>Examiner</b><br>Milap Shah        | <b>Art Unit</b><br>3714                   |  |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 24 May 2007.
- 2a) ☒ This action is **FINAL**.                      2b) ☐ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 1-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 1-17 is/are rejected.
- 7) ☐ Claim(s) \_\_\_\_\_ is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All    b) ☐ Some \* c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- \* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                                | 4) <input type="checkbox"/> Interview Summary (PTO-413)<br>Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)                       | 5) <input type="checkbox"/> Notice of Informal Patent Application                       |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO/SB/08)<br>Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____  |

### DETAILED ACTION

This action is in response to the amendment received on May 24, 2007. The Examiner acknowledges that all of claims 1-17 have been amended, no claims have been canceled, and no new claims have been added. Therefore, claims 1-17 are currently pending.

#### *Claim Objections*

Claim 1 is objected to because of the following informalities: Claim 1 recites "... a viewpoint is remains after..." in the second to last line of the claim, where the word "is" should be removed. Appropriate correction is required.

Claim 2 is objected to because of the following informalities: It appears the Applicant intended to amend claim 2 similar to the amendment of claim 4; however, the Examiner assumes a typographical error occurred. Claim 2 recites, "wherein the pasting process... is pasted on the projection plane" which is the same limitation as recited in independent claim 1. Additionally, the latter part of claim 2 refers to "the designated part" which lacks antecedent basis. For examination purposes, the Examiner will make the assumption that the second limitation of claim 2 should be or is similar to the second limitation of claim 4, which recites "at least one of the parts is designated..." which would also provide a proper antecedent basis for "the designated part" later in the claim. Appropriate correction is required.

#### *Double Patenting*

Applicant is advised that should claims 1 & 2 be found allowable, claims 5 & 6 will be objected to under 37 CFR 1.75 as being a substantial duplicate thereof. When two claims in an application are duplicates or else are so close in content that they both cover the same thing, despite a slight difference in

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wording, it is proper after allowing one claim to object to the other as being a substantial duplicate of the allowed claim. See MPEP § 706.03(k).

In the instant application, it appears claim 5 originally intended to recite a storage medium having a program and claim 1 was only directed to a program per se. Due to 35 U.S.C. 101 issues, it appears the Applicant amended claim 1 to recite the program is stored in a computer-readable storage medium, therefore, claims 1 & 5 now are so close in content that they both cover the same thing, despite a slight difference in wording. Dependent claim 6 corresponds to dependent claim 2.

*Claim Rejections - 35 USC § 112*

The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

Claims 1, 3, & 5 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claims, 1, 3, & 5 recite the limitation "the projection light source" in the last line of the limitation starting with "a pasting process...". There is insufficient antecedent basis for this limitation in the claim. Additionally, the Examiner is unclear as to if the initial projection source is a virtual "light" source or merely a projection starting point, that is, the Examiner is unclear how "light" affects the pasting process. At least for consistency, the Applicant is requested to either recite "virtual light source" or "projection light source" throughout the claims.

*Claim Rejections - 35 USC § 102*

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-17 are rejected under 35 U.S.C. 102(b) as being anticipated by Akisada et al. (U.S. Patent No. 5,687,307, hereafter “Akisada”).

**Claims 1, 3, & 5:** Akisada discloses the same invention including a program, display method, or system for projecting a predetermined image on a character of a game (i.e. character may be considered any object in the game) in a game machine having an operation unit (figure 1[display unit 8]), a calculation processing unit (figure 1[arithmetic and logic unit 6]), and a control unit (figure [controller 1]) connected to operation and calculation processing units. Akisada discloses the program, method, or system to comprise of an image creation process, which creates an image consisting of a two-dimensional coordinates (figure 8 – the 2D image of the “M” symbol must have been created through an image creation processor), and a pasting process which arranges the created image and a virtual light source (i.e. the virtual light source is considered the virtual viewpoint source, as in, where the projection is oriented from, such as in figure 8, point P) for projecting the image onto a character at an arbitrary position in the vicinity of the character in a 3D virtual space (figure 8), based on an input signal from the operation unit, and for pasting on the character a projected image created by projecting the image onto the character from the projection source (figure 8, where the projection source is point P and the projected image is the “M” symbol; see also column 9, lines 38-64), wherein the pasting process pastes on the character the projected image such that the projected image projected on a projection plane closest to a viewpoint remains after the character projected on the projected image is pasted on the projection plane (figures 11A & 11B clearly show the viewpoint of the projection image remains even when viewed from various angles).

Regarding claim 3, the gaming machine is the computer graphics apparatus as disclosed in figure 1 and described above, where the gaming machine performs is considered to perform the same process as described above.

Regarding claim 5, the program must be stored on a computer-readable storage medium attached to the gaming machine, similarly to that of the program of claim 1.

Regarding claim 7, from the above disclosure and explanation of Akisada, the specific steps correspond to the structure of claim 1 that would perform said steps, such as the image creation process would be creating predetermined projection image data as recited in claim 7. Similarly, arranging the object and the projection image and determining the relative position of the projection image and the virtual light source for projecting the projection image onto the object, are processes that are described above. Additionally, Akisada inherently discloses calculating the distance between the virtual light source and a projection plane containing the projection position on the object, and calculating the projection plane of the object, onto which the projection image is projected, removing from the projection image on a projection plane beyond a predetermined distance from the virtual light source (see at least figures 3, 4, & 8, column 5, line 17 – column 7, line 29, and column 9, lines 38-64). Lastly, Akisada also discloses projecting the projection image onto the projection plane with the virtual light source as a viewpoint, and pasting the projection image to the projection plane of the object and creating object image data for the object to which the projection image is pasted (clear in at least figures 3, 4, & 8).

Regarding claim 12, all of the above applies, additionally, the only apparent difference between claims 7 & 12 seems to be that each pixel of the projection image is viewed separately such that the distance between virtual light source and the projection plane is calculated for each pixel of the projection image that is to be pasted onto the object. Akisada must perform the same

operation, as seen in figure 8, the “M” symbol is mapped to a spherical object, such that the position of each pixel of the “M” symbol must have been determined based on distances inherently calculated by the process of applying the projection image to the object, for at least the reason that if such an operation was not performed, the projection image would not appear proper on the object and may look deformed, stretched, or in some way irregular.

**Claims 2, 4, 6, 11:** It is known in computer graphics processing that characters, objects, and the like are constructed from a plurality of polygons, thus, the character or object is considered to be a combination of a plurality of parts, where the parts are polygons, or alternatively, pixels (column 24, lines 58-60). Therefore, at least one part, such as a single polygon, is capable of being the designated part as to which the projected image is placed upon. The control unit (figure 1[controller 1] controls operation of the game machine, system, or program and an attached operation unit (figure 1[display unit 8]) performs the image projection or display process.

**Claim 8:** Akisada discloses a user can initialize the processes where the user enables a keyboard/mouse attached to the game machine, and the game machine’s controller takes care of the actual processes (column 8, lines 27-28).

**Claims 9, 10, 13, & 14:** Akisada discloses the projection image may be pasted (i.e. texture mapping) such that the transparency is adjusted so as to have the projection image and object image superimposed (figure 8 & column 27, lines 32-43). The settings may be changed based on various conditions including the distance between the positions of the virtual light source, the projection object, and the object.

**Claims 15-17:** See above explanation of claims 2, 4, 6, & 11, as the same applies for claims 15-17, which depend from claims 8-10, where applicable.

*Response to Arguments*

In view of Applicant's amendments, all outstanding 35 U.S.C. 101 rejections are hereby withdrawn.

Applicant's arguments with respect to claims 1-17 have been considered but are moot in view of the new ground(s) of rejection.

*Conclusion*

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure:

| <u>Name</u> | <u>Reference</u>          | <u>Applicability</u>  |
|-------------|---------------------------|---|
| Sasaki      | U.S. Patent No. 5,577,960 | A similar image projection method/system for mapping textures to polygons, see figures 4A-12. |
| Cosman      | U.S. Patent No. 5,651,104 | Texture mapping with pixel blending   |

Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a).

A shortened statutory period for reply to this final action is set to expire **THREE MONTHS** from the mailing date of this action. In the event a first reply is filed within **TWO MONTHS** of the mailing date of this final action and the advisory action is not mailed until after the end of the **THREE-MONTH** shortened statutory period, then the shortened statutory period will expire on the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than **SIX MONTHS** from the date of this final action.


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Milap Shah whose telephone number is (571) 272-1723. The examiner can normally be reached on M-F: 9:30AM-6:00PM.



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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Robert Pezzuto can be reached on (571) 272-6996. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free). If you would like assistance from a USPTO Customer Service Representative or access to the automated information system, call 800-786-9199 (IN USA OR CANADA) or 571-272-1000.



Robert Pezzuto  
Supervisory Patent Examiner  
Art Unit 3714

M.B.S.